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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,843	03/18/2004	In-Gon Park	678-1238	6438

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EXAMINER

ANGLO, LHEIREN MAE ACOSTA

ART UNIT	PAPER NUMBER
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2832

MAIL DATE	DELIVERY MODE
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09/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/803,843	Applicant(s) PARK ET AL.	
	Examiner Lheiren Mae A. Anglo	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20051212</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Levy [US 7,126,498].

In regard to claim 12, Levy teaches in [Fig. 3] a key input device for a portable communication terminal comprising: a printed circuit board [46]; a dome switch plate [38] having a plurality of dome switches [44, col. 11, lines 7+] mounted on the printed circuit board; and a plurality of linear key arrays positioned over the dome switch plate, each key array having first and second key regions [see attached figure] connected to each other at a boundary portion [see attached figure]; wherein a dome switch is located under the boundary portion and each outer end of each linear key array.

In regard to claim 13, Levy teaches in [Fig.3] a key input device for a portable communication terminal having a printed circuit board [46] and a dome switch plate [38] having a plurality of dome switches [col. 11, lines 7+] mounted on the printed circuit board, comprising: a plurality of linear key arrays positioned over the dome switches,

each linear key array having first and second key regions [see attached figure] connected at a central boundary portion [see attached figure], wherein the ration of first and second key regions to dome switches in 2:3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy [US 7,126,498] in view of Wulf et al. [Wulf hereinafter, US 3,971,902].

In regard to claim 8, Wulf teaches in [Fig. 3] a key input device for a portable communication terminal having a printed circuit board [46] provided in a body of the terminal, a dome switch plate [38] mounted on an upper surface of the printed circuit board, and one or more keys located above the dome switch plate, comprising: one or more linear key arrays, each key array being provided with first and second key regions [see attached figure], which are exposed to the user and connected to each other at a boundary portion [see attached figure] between the first and second key regions, the first and second key regions being curved when their respective outer and inner ends are pressed down; and dome switches [44 and col. 11, lines 7+] formed on the dome switch plate under the linear key arrays, the dome switches being arranged under the boundary portion between the first and second key regions of the respective key

arrays, under the first key region of the respective key arrays near its outer end, and under the second key region of the respective key arrays near its outer end. Levy does not teach that the outer ends of the first and second key regions are mounted near an outer rim of the body. Wulf teaches in [Fig. 2] that the outer ends of the first and second key regions are mounted near an outer rim of the body. It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the key regions near an outer rim of the body to provide a secure attachment.

In regard to claim 9, Levy teaches in [col. 11, lines 15+] that the key arrays are made of a soft material.

In regard to claim 10, Levy teaches in [Fig. 3] that the first and second key regions are integrally connected to each other at the boundary portion.

In regard to claim 11, Levy teaches in [Fig. 3] a key input device for a portable communication terminal having a printed circuit board [46] in a body of the terminal, comprising: a plurality of linear key arrays, each key array having first and second key regions [see attached figure] connect to each other at a boundary portion [see attached figure] between respective outer ends of the first and second key regions; and a plurality of dome switches [38,44 and col. 11, lines 7+] mounted on an upper surface of the printed circuit board, between the linear key arrays and the printed circuit board, a dome switch of the plurality of dome switches being positioned under each outer end and each boundary portion of each linear key array of the plurality of key arrays. Levy does not teach that the outer ends are located near an outer rim of the terminal body. Wulf teaches in [Fig. 2] that the outer ends are located near an outer rim of the terminal body.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the outer ends near an outer rim of the terminal body to provide a secure attachment.

In regard to claims 1-7, Levy teaches the soft key arrays of claim 8, which allows a push-type actuation. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the key arrays and protrusions of claim 1, since the seesaw-type actuation is another known type of switch actuation.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lheiren Mae A. Anglo whose telephone number is (571) 272-2730. The examiner can normally be reached on Monday to Friday 8:00 am to 4:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Lma

Lheiren Mae A. Anglo
Examiner
AU 2832


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SUPERVISORY PATENT EXAMINER
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